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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,453	04/16/2004	Stephen K. Pinto	17146-009001	1046
26161	7590	11/15/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			FREJD, RUSSELL WARREN	
			ART UNIT	PAPER NUMBER
			2128	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/826,453

**Applicant(s)**

PINTO ET AL.

**Examiner**

Russell Frejd

**Art Unit**

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7.17.06, 2.28.05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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***Examination of Application #10/826,453***

1. Claims 1-9 of application 10/826,453, filed on 16-April-2004, are presented for examination.

***Claim Objections under 37 CFR 1.75(d)(1)***

2. Claims 1, 2 and 6 are objected to under 37 CFR 1.75(d)(1), wherein the phrase "method comprising" is understood to be "method comprising:".

***Claim Rejections under 35 U.S.C. § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

- 3.1 Claims 1-3, 5-7 and 9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The invention claims (claim 1 preamble), "*A machine-based method (for generating a predictive set of variables).*"

- 3.2 MPEP Section 2106(IV)(B)(2)(b)(ii) provides that a statutory computer process is determined not by how the computer performs the process, but by what the computer does to achieve a practical application with a useful, concrete and tangible result. For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory, while a claimed process for digitally filtering noise employing the mathematical algorithm is statutory. The long line of cases in this area that are referred to in MPEP Section

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2106(IV)(B)(2)(b)(ii) exemplify this requirement, by utilizing in the claim language, terms such as controlling, executing, changing and removing. In view of the aforementioned requirement and the interim guidelines for 101 subject matter eligibility, the Examiner respectfully contends that the claim language of independent claims 1, 2 and 6, do not claim a practical application or provide a useful, concrete and tangible result, that language claiming: (In regard to claim 1)

in connection with a process in which a user **generates** (emphasis added) a predictive set of variables based on historical data about a system being modeled, enabling the user to automatically **generate** transformations of variables of the data, and automatically **rank** the performance of the predictor variables.

**3.3** For at least these reasons, the Examiner respectfully posits that the claims of the present invention do not meet the criteria for a statutory process. Accordingly, the claims are determined to be a machine-based method for generating a predictive set of variables, consisting solely of mathematical operations, converting one set of numbers into another set of numbers, whereby the method does not manipulate appropriate subject matter, and thus cannot constitute a statutory process (MPEP Section 2106(IV)(B)(2)(c)).

**3.4** For at least these reasons, the Examiner respectfully posits that the claims of the present invention do not meet the criteria for a statutory process. Accordingly, the claims are determined to be computer executable software code, or a program per se, consisting of a machine-readable medium having software instructions that implement the machine-based method for generating a predictive set of variables, whereby the method does not manipulate appropriate subject matter, and thus cannot constitute a statutory process (MPEP Section 2106(IV)(B)(2)(c)).

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***Claim Rejections under 35 U.S.C. § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.1 Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by the article authored by Bhattacharyya, entitled *Evolutionary Algorithms in Data Mining: Multi-Objective Performance Modeling for Direct Marketing*.

4.2 Bhattacharyya discloses, in regard to claim 1: in connection with a process in which a user generates a predictive set of variables based on historical data about a system being modeled [p. 465, col. 2, par. 1, "characterizing the customer"], enabling the user to automatically generate transformations of variables of the data [p. 465, col. 2, par. 1, "defining the dependent variables being modeled"], and automatically rank the performance of the predictor variables [p. 466, col. 1, par. 2 and 3].

Claim 2: automatically identifying distinguishing characteristics of segments of customers in the system [p. 465, col. 2, par. 1, "characterizing the customer"].

Claim 3: in which the identifying process includes ranking of the set of predictor variables with respect to predictive power for population of customers with respect to at least one target variable [p. 465, col. 2, par. 1, "response frequency"; p. 466, col. 1, par. 2 and 3].

Claim 4: providing to the user a graphical display of the potency of variables with respect to distinguishing the segments of customers [p. 470, col. 2, par. 6, "visualization of models"].

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Claim 5: enabling the user to determine variables associated with the data that are tied to behaviors of the customers, including enabling the user to prepare the historical data, transform variables associated with the data, and determine the fit of a model to the data [p. 465, col. 2, par. 1].

Claim 6: in connection with a project in which a user generates a series of predictive models based on historical data about a commercial system being modeled, automatically identifying distinguishing characteristics of segments of customers in the system [p. 465, col. 2, par. 1].

Claim 7: the identifying includes ranking the population of predictor variables with respect to at least one target variable [p. 466, col. 1, par. 2 and 3].

Claim 8: the user is provided a graphical display of the potency of variables with respect to distinguishing the segments of customers [p. 470, col. 2, par. 6, "visualization of models"].

Claim 9: the user is enabled to determine variables associated with the data that are tied to behaviors of the customers, including enabling the user to prepare the historical data, transforming variables associated with the data, and determining the fit of the model to the data [p. 465, col. 2, par. 1].

### ***Response Guidelines***

**5.** A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

**5.1 Any response to the Examiner in regard to this non-final action should be**

**directed to:** Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, **or** the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279. Inquires of a general nature or

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relating to the status of this application should be directed to the TC2100  
Group Receptionist (571) 272-2100.

**mailed to:** Commissioner of Patents and Trademarks  
P.O. Box 1450, Alexandria, VA 22313-1450

**or faxed to:** (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph  
Building, 401 Dulany Street, Alexandria, VA, 22314.

**Date:** 3-September-2006

  
\_\_\_\_\_  
**RUSSELL FREJD  
PRIMARY EXAMINER**